C-more micro

AUTOMATIONDIRECT

3505 HUTCHINSON ROAD
CUMMING, GA 30040-5860

Quick Start Guide

C-more 6" Micro-Graphic Panels, Accessories & Replacement Parts

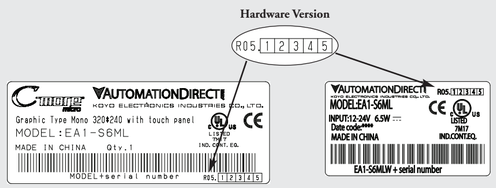
EA1-S6ML
shown in Landscape (Horizontal) mode

EA1-S6MLW
shown in Portrait (Vertical) mode

***NOTE: *C-more* Micro-Graphic panels with the letter "W" in the part number designate units with 5 selectable background colors of White, Pink1, Pink2, Pink3 and Red. Part numbers without the letter "W" are provided with 5 selectable background colors of Green, Red, Amber, Yellow and Lime.**

NOTE: Software and Firmware Version 2.0 or later is required with models EA1-S6ML and EA1-S6MLW. Available for free download at *www.automationdirect.com*.

Hardware Version



Product Package Label

Product Label

NOTE: *C-more* 6" Micro-Graphic panels with hardware version R05 and higher must use firmware version 3.20 or higher

General Description

The *C-more* 6" Micro-Graphic panel has a 5.7-inch STN LCD monochrome 320 x 240 dot display. Model EA1-S6ML has five selectable LED-driven backlight colors including Green, Red, Amber, Yellow and Lime. Model EA1-S6MLW has five selectable LED-driven backlight colors including White, Pink1, Pink2, Pink3 and Red. Both models feature five user-defined function keys, each key with a user-defined red LED indicator. The panels can display up to 40 lines by 80 characters of static text and up to 40 lines by 40 characters of dynamic text with embedded variables and phrases mixed with graphics at landscape orientation. Portrait orientation can display 60 characters and 53 lines of static text and 40 lines by 40 characters of dynamic text. Each model is rated UL for use on a flat surface of Type 1, 4X enclosure (indoor use only). The *C-more* 6" Micro-Graphic panels are powered from a 12-24 VDC power supply or can operate in low-power mode when powered from the serial communications port of select AutomationDirect PLCs.

Other features include:

- 1792 KB memory
- Built in RJ12 serial communications port (RS-232)
- Built in 15-pin serial communications port (RS-232/422/485)
- Adjustable contrast
- 2 optional keypad bezels, 20-button landscape and 21-button portrait mount
- Optional replaceable clear screen overlay
- Built in Alarm Control setup that activates beep, backlight flash, customized alarm banner, and red LED blinking
- Up to 999 screens, limited only by memory usage
- 0 to 50 °C (32 to 122 °F) operating temperature range
- UL, cUL & CE agency approvals (see below for details)
- 2-year warranty from date of purchase

Programming Software & Programming Cable (sold separately)

Programming Software

EA-MG-PGMSW

NOTE: Free download of the *C-more* Micro-Graphic programming software at the *AutomationDirect* web site.

USB to RS232 Programming Cable Assembly

EA-MG-PGM-CBL

Agency Approvals

UL/CUL/CSA/CE Certification Numbers					
Name	*UL/CUL*	*UL508*	*CSA*	*CE*	*ISO-9000*
C-more Micro-Graphic Panels & Accessories	E157382	E157382	234884	EN61131-2	Yes

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Safety Information

WARNING: To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.

Equipment damage or serious injury to personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.

If you have any questions concerning the installation or operation of this equipment, or if you need additional information, please call us at 1-800-633-0405 or 770-844-4200.

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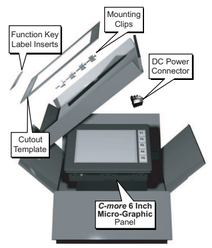
Before you begin...

Minimum items required to create a working system:

- ***C-more*** 6" Micro-Graphic panel
- ***C-more*** Micro-Graphic Programming Software EA-MG-PGMSW (Downloadable version available from the ***AutomationDirect*** web site at no charge.)
- ***C-more*** Micro-Graphic USB to RS232 Programming Cable Assembly EA-MG-PGM-CBL, used to connect between a PC and the Micro-Graphic panel's built-in serial port. The panel will operate in Low-Power mode when powered by the PC and the screen brightness is diminished.
- Power source – An external 12-24 VDC power source is required for normal High-Power operation. Recommended power supplies are AutomationDirect part numbers PSC-24-015 or PSC-24-030.
- Personal computer – to run the ***C-more*** Micro-Graphic programming software
- Communications Cable (serial) – to connect the ***C-more*** Micro-Graphic panel to your controller

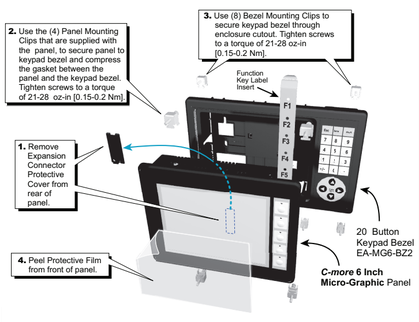
1 Unpack and Inspect

- Unpack the ***C-more*** Micro-Graphic panel from its shipping carton. Included in the carton are the following:
  - ***C-more*** 6" Micro-Graphic panel
  - cutout template
  - mounting clips
  - gasket
  - function key label inserts
  - Quick Start Guide
  - DC Power Connector
- Unpack any accessories that have been ordered, such as: Keypad Bezel, DC Power Supply, programming cable, communications cable, etc.
- Inspect all equipment for completeness. If anything is missing or damaged, immediately call the ***AutomationDirect*** returns department @ 1-800-633-0405.



2 Install Optional Hardware Accessories (sold separately)

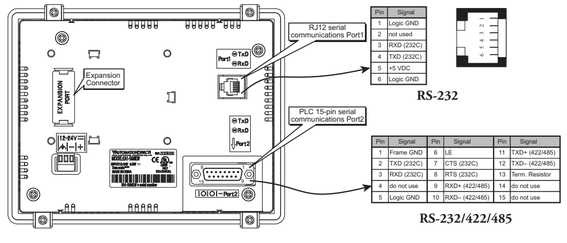
Shown is an example of a *C-more* 6" Micro-Graphic panel being assembled with an optional 20-button Keypad Bezel.


2. Use the (4) Panel Mounting Clips that are supplied with the panel, to secure panel to keypad bezel and compress the gasket between the panel and the keypad bezel. Tighten screws to a torque of 21-28 oz-in [0.15-0.2 Nm].
3. Use (8) Bezel Mounting Clips to secure keypad bezel through enclosure cutout. Tighten screws to a torque of 21-28 oz-in [0.15-0.2 Nm].
Function Key Label Insert
1. Remove Expansion Connector Protective Cover from rear of panel.
4. Peel Protective Film from front of panel.
20 Button Keypad Bezel EA-MG6-BZ2
C-more 6 Inch Micro-Graphic Panel

NOTE: Mounting clips for the panel or keypad bezel are included with each product

3 Become Familiar with Available Communication Ports

The *C-more* 6" Micro-Graphic panels include a built-in RJ12 serial communications port (RS-232) used to communicate with a PC during project development and later as a PLC communications interface. There is also a second 15-pin RS-232/RS-422/RS-485 port for communications to a PLC.



Pin	Signal
1	Logic GND
2	not used
3	RXD (232C)
4	TXD (232C)
5	+5 VDC
6	Logic GND

RS-232

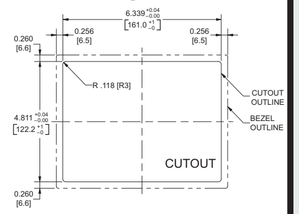
Pin	Signal	Pin	Signal	Pin	Signal
1	Frame GND	6	/LE	11	TXD+ (422/485)
2	TXD (232C)	7	CTS (232C)	12	TXD- (422/485)
3	RXD (232C)	8	RTS (232C)	13	Term. Resistor
4	do not use	9	RXD+ (422/485)	14	do not use
5	Logic GND	10	RXD- (422/485)	15	do not use

RS-232/422/485

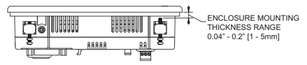
4 Install *C-more* 6" Micro-Graphic Panel

The *C-more* 6" Micro-Graphic panel can be mounted through a cutout in an enclosure by using the template provided with the panel, or using the dimensions shown. The optional keypad bezels also include templates. The enclosure mounting thickness range for the panels and the keypad bezels is 0.04"–0.2" [1–5 mm]. Mounting screw torque is 21-28 oz-in [0.15-0.2 Nm].

Panel Cutout (all models)
Landscape cutout shown



Enclosure Thickness



5 Install the Software and Develop a Project

NOTE: Software and Firmware Version 2.0 or later is required with models EA1-S6ML and EA1-S6MLW. Available for free download at *www.automationdirect.com*.

Following are the minimum system requirements for running *C-more* Micro-Graphic Programming Software, EA-MG-PGMSW, on a PC:

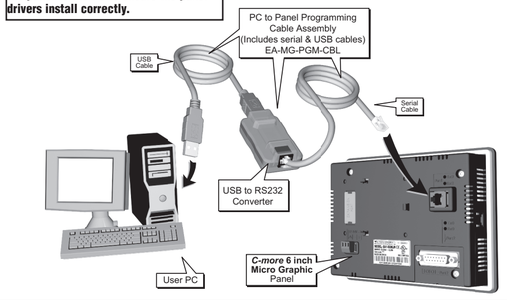
- Operating System - Windows® XP Home / Professional Edition Service Pack 2, Windows® 2000 with Service Pack 4, Windows® Vista (32 or 64 bit), Windows® 7 (32 or 64 bit) or Windows 8 (32 or 64 bit)
- Keyboard and Mouse or compatible pointing device
- Super VGA color video adapter and monitor with at least 800 x 600 pixels resolution (1024 x 768 pixels recommended) 64K color minimum
- 150 MB free hard-disk space
- CD-ROM or DVD drive for installing software from the CD, or internet access to download free programming software
- USB port to use with an EA-MG-PGM-CBL, USB to RS232 Programming Cable Assembly for project transfer from the programming software to the panel

6 Connect *C-more* Micro-Graphic Panel to Computer

Use an EA-MG-PGM-CBL, USB to RS-232 Programming Cable Assembly, from a USB port type A on the project development PC, through the supplied converter, to the RJ12 RS-232 programming/PLC serial communications port on the *C-more* Micro-Graphic panel as shown below.

NOTE: Install C-more Micro-Graphic Programming software before connecting the panel to the PC to ensure the panel drivers install correctly.

USB to RS-232 Programming Cable Assembly

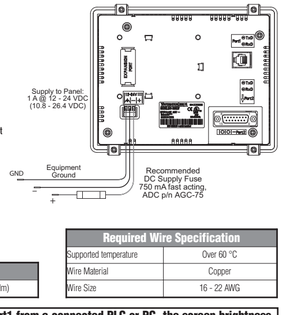

PC to Panel Programming Cable Assembly (Includes serial & USB cables) EA-MG-PGM-CBL
USB Cable
Serial Cable
USB to RS232 Converter
User PC
C-more 6 inch Micro Graphic Panel

7 Provide Power to the *C-more* 6" Micro-Graphic Panel

1). The panel should be powered by a 1 Amp @ 12-24 VDC class 2 power source in normal operation.

2). The ***C-more*** 6" Micro-Graphic panel is powered during programming from the PC through the USB to RS-232 Programming Cable Assembly, EA-MG-PGM-CBL. When powered from the PC, the panel will operate in Low-Power mode.

3). Optionally, the ***C-more*** 6" Micro-Graphic panel can be powered in Low-Power mode* from most AutomationDirect PLC's RJ12 serial communications port by using a DV-1000CBL communications cable, or a DV-1000CBL communications cable with a FA-15HD 15-pin HD DSub/RJ12 Adapter connected to an AutomationDirect PLC's 15-pin HD communications port (DL06, D2-250-1 & D2-260) PLCs. See Chapter 6: PLC Communications in the Hardware User Manual (EA6-USER-M) for additional details.



Tightening Torque	
Power supply wire connection	1.7 lb-in (0.2 Nm)

Required Wire Specification	
Supported temperature	Over 60 °C
Wire Material	Copper
Wire Size	16 - 22 AWG

***NOTE: When the panel is powered through Port1 from a connected PLC or PC, the screen brightness is diminished because the panel is running in Low-Power Mode. For full brightness, connect an external 12-24 VDC power source to the panel's power connection. Low-Power Mode should be used during initial programming only. Connect an external 12-24 VDC power source when the panel is installed in its application.**

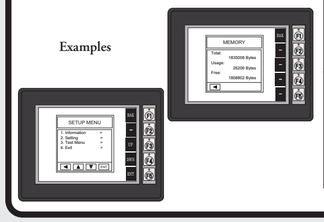
NOTE: Recommended DC power supply to power the *C-more* Micro-Graphic Panel, *AutomationDirect* Part No. PSC-24-015 or PSC-24-030.

8 Accessing the *C-more* Micro-Graphic Panel Setup Screens

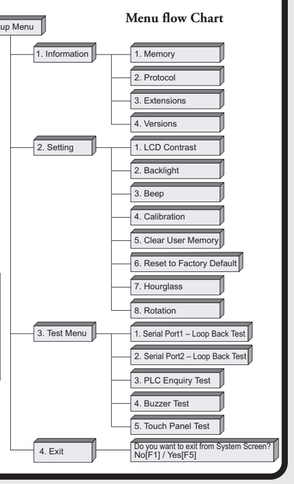
To access the **Setup Menu** of the panel's setup screens, press the the BAK [F1] and ENT [F5] function keys simultaneously for three (3) seconds.

From the Setup Menu, information about the panel can be obtained, settings can be adjusted, and panel functions can be tested.

Examples



Menu flow Chart



9 Choose *C-more* 6" Micro-Graphic Panel to PLC Protocols & Cables

PLC Drivers	
Serial - port1 or port2	***Serial - port2 only***
AutomationDirect Productivity3000	Allen-Bradley DF1 Full Duplex
AutomationDirect CLICK	Allen-Bradley DF1 Half Duplex
AuomationDirect Do-more	Allen-Bradley PLC5 DF1
AutomationDirect K-sequence	Allen-Bradley DH485
AutomationDirect DirectNET	GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
AutomationDirect Modbus	Mitsubishi FX
Modicon Modbus RTU	Mitsubishi Q and QnA
Entivity Modbus RTU	Omron Host Link (C200 Adapter, C500)
	Omron FINS Serial (CJ1, CS1)
	Siemens PPI (S7-200 CPU)
	AutomationDirect SOLO Temperature Controller
	AutomationDirect GS Drives

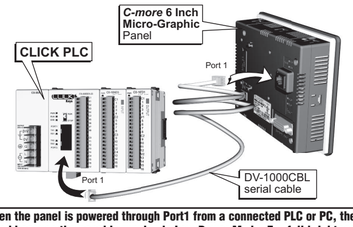
Cable Description	Cable Part No.
Cables used with serial Port1	
AutomationDirect Productivity Series, Do-more, CLICK, ***Direct***LOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 & H2-WinPLC (RS-232C)	***DV-1000CBL***
Note: The PLC can provide 5 VDC through this cable. No external 12-24 VDC souce is required, however, screen brightness is diminished and the alarm beep will not function.	
DirectLOGIC DL405 PLC 15-pin D-sub port, DL405 (RS-232C)	***D4-1000CBL***
DirectLOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C) Use with DV-1000CBL cable.	***FA-15HD***
DirectLOGIC PLC 15-pin D-sub port, DL405 (RS-232C).	***FA-CABKIT***
DirectLOGIC PLC RJ-11 port, D3-340 (RS-232C).	***OP-3CBL-1***

Cable Description	Cable Part No.
Cables used with serial Port2	
AutomationDirect Productivity Series Do-more, CLICK, ***Direct***LOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 & H2-WinPLC (RS-232C)	***EA-2CBL***
DirectLOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C).	***EA-2CBL-1***
DirectLOGIC PLC RJ-11 port, D3-340 (RS-232C).	***EA-3CBL***
DirectLOGIC DL405 PLC 15-pin D-sub port, DL405 (RS-232C).	***EA-4CBL-1***
DirectLOGIC PLC 25-pin D-sub port, DL405, D3-350, DL305 DCU and all DCM's (RS-232C).	***EA-4CBL-2***
Allen-Bradley MicroLogix 1000, 1100, 1200 & 1500 (RS-232C)	***EA-MLOGIX-CBL***
Allen-Bradley SLC 5-03/04/05, ControlLogix, CompactLogix, FlexLogix DF1 port (RS-232C)	***EA-SLC-232-CBL***
Allen-Bradley PLC-5 DF1 port (RS-232C)	***EA-PLC5-232-CBL***
Allen-Bradley MicroLogix, SLC 5-01/02/03, PLC5 DH485 port (RS-232C)	***EA-DH485-CBL***
GE 90/30, 90/70, Micro 90, Versamax Micro (Port2) 15-pin D-sub port (RS-422A)	***EA-90-30-CBL***
MITSUBISHI FX Series 25-pin port (RS-422A)	***EA-MITSU-CBL***
MITSUBISHI FX Series 8-pin mini-DIN (RS-422A)	***EA-MITSU-CBL-1***
OMRON Host Link (C200 Adapter, C500) (RS-232C)	***EA-OMRON-CBL***

NOTE: For the latest list of available PLC drivers and PLC cables go to *www.automationdirect.com*.

10 Connect *C-more* 6" Micro-Graphic Panel to PLC

Connect the serial communications cable between the *C-more* Micro-Graphic panel and the PLC. The panel can be connected to the PLC via the panel's built-in RJ12 serial communications port (RS-232) or 15-pin serial communications port with either RS-232, RS-422 or RS-485 communications.



***NOTE: When the panel is powered through Port1 from a connected PLC or PC, the screen brightness is diminished because the panel is running in Low-Power Mode. For full brightness, connect an external 12-24 VDC power source to the panel's power connection. Low-Power Mode should be used during initial programming only. Connect an external 12-24 VDC power source when the panel is installed in its application.**

Additional Help and Support

- For product support, specifications, and installation troubleshooting, a Hardware User Manual can be downloaded from the On-line Documentation area of the ***AutomationDirect*** web site or purchased through the ***AutomationDirect*** Sales team @ 1-800-633-0405 as part number EA1-MG6-USER-M.
- For software programming help, refer to the ***C-more*** Micro-Graphic Programming Software on-line embedded help.
- Refer to demos of the product at: www.CmoreMicro.com/software/software_demo.html
- For additional technical support and questions, call our Technical Support team @ 1-800-633-0405 or 770-844-4200.

C-more 6" Micro-Graphic Panel Specifications

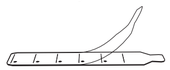
Specifications		
Description:	320 x 240 dots LCD display (Landscape Mode), five user defined keypad function buttons, and five user defined LED's	
Display:		
• Type	5.7" STN monochrome LCD, graphical characters	
• Resolution	320 (W) x 240 (H) dots (Landscape Mode) 240 (W) x 320 (H) dots (Portrait Mode)	
• Color	2 colors (normal / inverse)	
• Display Brightness (Reference)	***Low Power Mode****	***High Power Mode***
	Red –> 10 nits Green –> 11 nits White –> 13 nits	Red –> 50 nits Green –> 125 nits White –> 150 nits
• Viewing Area Size	4.614" (W) x 3.480" (H) [117.2 mm x 88.4 mm]	
• Active Area Size	4.535" (W) x 3.400" (H) [115.2 mm x 86.4 mm]	
• Contrast	Adjusted from the panel's built-in configuration setup menu	
• Viewing Angle	3, 9 o'clock axis –> 45 degrees 6 o'clock axis –> 40 degrees 12 o'clock axis –> 20 degrees	
Backlight:		
• Type	LED	
• Color	Model EA1-S6ML : 5 user defined colors: Red, Green, Amber, Lime, and Yellow Model EA1-S6MLW : 5 user defined colors: White, Pink1, Pink2, Pink3, and Red	
• User Replaceable	No	
Touch Screen:		
•Type	Analog touch panel	
• Operation	82 gram force [0.8 N] maximum	
• Life	Minimum of 1,000,000 cycles	
Features:		
• User Memory	1792 kBytes	
• Number of Screens	Up to 999 – limited by project memory usage	
• Beep (Internal)	Yes	
• Keypad Function Buttons	Five user defined function key buttons with the ability to custom label with an overlay. Minimum of 500,000 cycles	
• Keypad Function Button LEDs	Each function key button includes a red LED that can be user programmed.	
• Serial Communications	Built-in RJ12 serial communications port (RS-232) and 15-pin D-sub serial communications port (RS-232, RS-485 / 422).	
• Expansion Connection	Yes – used with optional Keypad Bezels, EA-MG6-BZ2 & EA-MG6-BZ2P	
Screen Objects:		
• Functional Devices	Push Button, Switch, Indicator Button, Indicator Light, Graphic Indicator Light, Numeric Display, Numeric Entry, Inc/Dec Value, Bar Graph, Bitmap Button, Static Bitmap, Dynamic Bitmap, Recipe Button, Static Text, Lookup Text, Dynamic Text, Screen Change Push Button, Screen Selector, Adjust Contrast, Function, Key Configuration Object, Real Time Graphics Line Graph, Analog Meter.	
• Static Shapes	Lines, Rectangles, Circles and Frames	
• Displayable Fonts	Fixed fonts: 6x6, 6x8, 8x16, 16x16, 32x16, 32x32, and Windows fonts	
Electrical:		
	Low Power Mode*	***High Power Mode***
• Input Voltage Range	5.0 VDC (4.75 – 5.25 VDC)	12/24 VDC (10.2 – 26.4 VDC)
• Input Power	Supplied through the panel's RJ12 serial communications port connection when used with most AutomationDirect PLCs having a RJ12 communication port or from a PC USB.	Supplied from an external 12-24 VDC power source
• Power Consumption	1.05 W @ 5 VDC (210 mA)	6.5 W @ 10.2 VDC (630 mA)
• Recommended Fuse	No fuse required when directly connected to a PLC or PC with recommended cable.	Type AGC fast acting glass fuse, 750 mA, 250 VAC, ADC p/n AGC-75
• Maximum Inrush Current	1 A for 500 µs	10 A for 500 µs
• Acceptable External Power Drop Duration	Maximum 1 ms	
Environmental:		
• Operating Temperature	0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating 50 °C	
• Storage Temperature	–20 to +60 °C (–4 to +140 °F)	
• Humidity	5–95% RH (non-condensing)	
• Environmental Air	For use in Pollution Degree 2 environment	
• Vibration	IEC60068-2-6 (Test Fc), 5-9 Hz: 3.5 mm amplitude, 9-150 Hz: 1.0G, sweeping, at a rate of 1 octave/min. (±10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes	
• Shock	IEC60068-2-27 (Test Ea), 15 G peak, 11 ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)	
• Noise Immunity	NEMA ICS3-304 RFI, (145 MHz, 440 Mhz 10 W @ 10 cm) Impulse 1000 V @ 1 µs pulse	
• Enclosure	For use on a flat surface of Type 1, 4X enclosure (for **indoor** use only)	
• Agency Approvals	CE (EN61131-2), UL508, CUL Canadian C22.2 No. 142-M95, UL File E157382, CSA File 234884	
Physical:		
• Dimensions	6.850" (W) x 5.331" (H) x 2.130" (D) [174.0 mm x 135.4 mm x 54.1 mm] (Landscape Mode) 5.331" (W) x 6.850" (H) x 2.130" (D) [135.4 mm x 174.0 mm x 54.1 mm] (Portrait Mode)	
• Enclosure Mounting Thickness Range	0.04" – 0.2" [1 – 5 mm]	
• Mounting Clip Screw Torque Range	21 – 28 oz-in [0.15 – 0.2 Nm]	
• Depth from bezel rear with options Module	1.894" [47.1 mm]	
• Weight	30.69 oz. (870 g)	

***NOTE: When the 6" panel is powered through Port1 from a connected PLC or PC, the screen brightness is diminished because the panel is running in Low-Power Mode. For full brightness, connect an external 12-24 VDC power source to the 6" panel's power connection. Low-Power Mode should be used during initial programming only. Connect an external 12-24 VDC power source when the panel is installed in its application.**

Customizing the Function Keys Label Insert

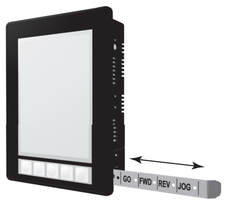
Step 1 - Remove existing function key label insert using a small tool such as jeweler's screw driver.

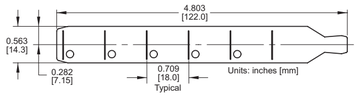
Step 2 - Remove the protective film from the blank key label insert.



Step 3 - If desired, print and apply self adhesive labels to the blank insert.

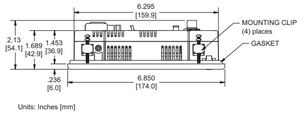
Step 4 - Install the new insert into the slot in the side of the panel and lock tab into place.



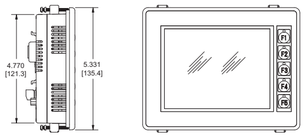


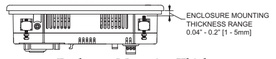
C-more Micro-Graphic Panel Dimensions

EA1-S6ML & EA1-S6MLW Panel Dimensions



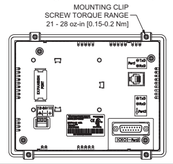
NOTE: Panel shown in Landscape (Horizontal) orientation





Enclosure Mounting Thickness

Mounting Clip Screw Torque



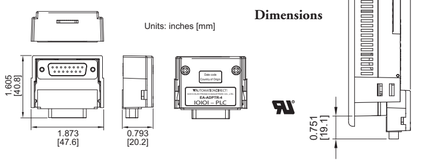
Communication Port Adapters

D-SUB 15-pin 90-degree Communication Port Adapter (EA-ADPTR-4)

The EA-ADPTR-4 adapter plugs into the 15-pin serial port on the rear of the 6" panel to allow a PLC communication cable to be plugged in at a 90 degree angle to reduce panel depth requirements. 15-pin straight through pin-out. UL Recognized.

EA-ADPTR-4

Dimensions

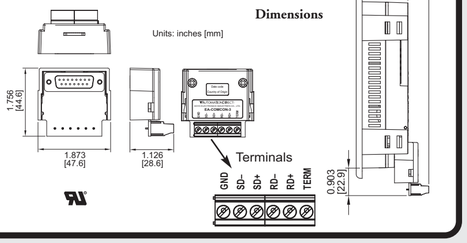


D-SUB 15-pin to Terminal Block Adapter (EA-COMCON-3)

The EA-COMCON-3 adapter plugs into the 15-pin serial port on the rear of the 6"panel to allow wire terminal connections for an RS-422/RS-485/DH-485 PLC communication cable. UL Recognized.

EA-COMCON-3

Dimensions

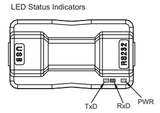


USB to RS232 Programming Cable Assembly

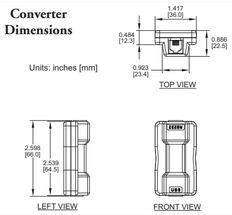
USB to RS232 Converter Specifications	
Part Number:	EA-MG-PGM-CBL
Description:	6-ft. cable assembly to connect personal computer to any ***C-more*** Micro-Graphic panel for setup and programming. (Note: This cable assembly uses the PC's USB port and converts the signals to serial transmissions. The USB port supplies 5 VDC to the Micro-Graphic panel for configuration operations.) Assembly includes standard USB A-type connector to B-type connector cable, custom converter, and an RS232C cable (DV-1000CBL) with RJ12 modular connector on each end.
Hardware:	
• USB Interface	USB Specification Rev. 1.1 Connector: USB Type B jack to accept USB Type B cable plug
• Serial Interface	RS232 (EIA-232-E) Connector: RJ12 phone jack 6p to accept RJ12 cable plug
• Baud Rate	115.2 kbps Maximum
• Input Voltage	5 VDC (Supplied thru serial interface cable.)
• Power Consumption	50 mA (Does not include power to panel and/or bezel.)
Accessory Cables:	
• USB Cable	USB Type A plug to PC on one end, USB Type B plug to converter on other end, 0.30 m [1 foot] length (* Note)
• Serial Cable	DV-1000CBL cable with RJ12 phone plug connectors on both ends, 2.0 m [6.56 feet] length (* Note)
Physical:	
• Dimensions	2.559" (W) x 1.417" (H) x 0.886" (D) [65.0 mm x 36.0 mm x 22.5 mm]
• Weight	1.06 oz. [30 g]
Environmental: Same as C-more Micro-Graphic panel specifications.	

*** Note: Maximum cable length for either the USB or serial cable should not exceed 2.0 m [6.56 feet] in length.**

Converter Status Indicators



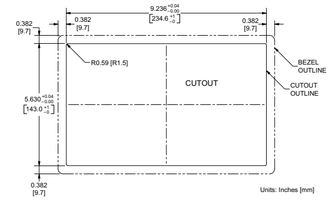
Converter Dimensions



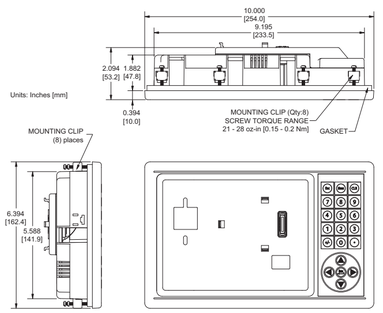
20 Button Landscape (Horizontal) Keypad Bezel

EA-MG6-BZ2 Keypad Bezel

EA-MG6-BZ2 Cutout Dimensions

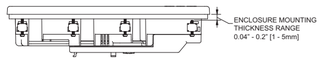


EA-MG6-BZ2 Keypad Bezel Dimensions



Four directional cursor buttons, numeric buttons and ESC, MENU, CLEAR and ENTER buttons.

Panel Thickness



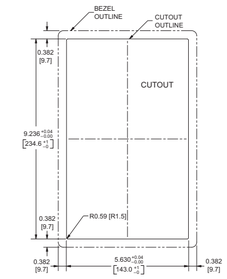
NOTE: Mounting clips for the panel or keypad bezel are included with each product

20-Button Keypad Bezel Specifications	
Part Number:	EA-MG6-BZ2
General:	
• Micro-Graphic Panels Supported	EA-S6ML, EA-S6MLW
• Connection	Connects with expansion connector on the rear of the C-more 6" Micro-Graphic panel.
• Power Consumption	None
• Keypad Button Life	Minimum of 500,000 cycles
• Enclosure Mounting	(8) mounting clips, EA-MG-BZ2-BRK, included. Note: The ***C-more*** 6" Micro-Graphic panel is installed into the keypad bezel using the (4) mounting clips, EA-MG-BZ2-BRK, that are supplied with the panel.
Environmental:	
• Operating Temperature	0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating 50 °C
• Storage Temperature	-20 to 60 °C (-4 to 140 °F)
• Humidity	5 to 95 % RH (non-condensing)
• Environmental air	For use in Pollution Degree 2 environment
• Vibration	IEC60068-2-6 (Test Fc), 5-9 Hz: 3.5 mm amplitude, 9-150 Hz: 1.0G, sweeping, at a rate of 1 octave/min. (±10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes
• Shock	IEC60068-2-27 (Test Ea), 15 G peak, 11 ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)
• Noise Immunity	NEMA ICS3-304 RFI, (145 MHz, 440 Mhz 10 W @ 10 cm) Impulse 1000 V @ 1 µs pulse
• Enclosure	For use on a flat surface of Type 1, 4X enclosure (for indoor use only)
• Agency Approvals	CE (EN61131-2), UL508, CUL Canadian C22.2 No. 142-M95, UL File E157382
Physical:	
• Dimensions	10.000" (W) x 6.394" (H) x 2.488" (D) [254.0 mm x 162.4 mm x 63.2 mm]
• Weight	26.1 oz. [740 g]

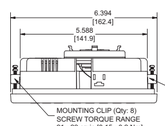
21 Button Landscape (Horizontal) Keypad Bezel

EA-MG6-BZ2P Keypad Bezel

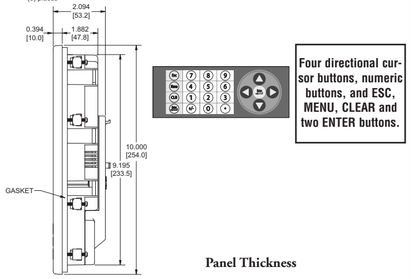
EA-MG6-BZ2P Cutout Dimensions



EA-MG6-BZ2 Keypad Bezel Dimensions

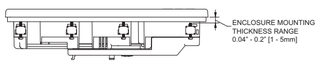


Units: Inches [mm]



Four directional cursor buttons, numeric buttons, and ESC, MENU, CLEAR and two ENTER buttons.

Panel Thickness



NOTE: Mounting clips for the panel or keypad bezel are included with each product

21-Button Keypad Bezel Specifications	
Part Number:	EA-MG6-BZ2P
General:	
• Micro-Graphic Panels Supported	EA-S6ML, EA-S6MLW
• Connection	Connects with expansion connector on the rear of the C-more 6" Micro-Graphic panel.
• Power Consumption	None
• Keypad Button Life	Minimum of 500,000 cycles
• Enclosure Mounting	(8) mounting clips, EA-MG-BZ2-BRK, included. Note: The ***C-more*** 6" Micro-Graphic panel is installed into the keypad bezel using the (4) mounting clips, EA-MG-BZ2-BRK, that are supplied with the panel.
Environmental:	
• Operating Temperature	0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating 50 °C
• Storage Temperature	-20 to 60 °C (-4 to 140 °F)
• Humidity	5 to 95 % RH (non-condensing)
• Environmental air	For use in Pollution Degree 2 environment
• Vibration	IEC60068-2-6 (Test Fc), 5-9 Hz: 3.5 mm amplitude, 9-150 Hz: 1.0G, sweeping, at a rate of 1 octave/min. (±10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes
• Shock	IEC60068-2-27 (Test Ea), 15 G peak, 11 ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)
• Noise Immunity	NEMA ICS3-304 RFI, (145 MHz, 440 Mhz 10 W @ 10 cm) Impulse 1000 V @ 1 µs pulse
• Enclosure	For use on a flat surface of Type 1, 4X enclosure (for indoor use only)
• Agency Approvals	CE (EN61131-2), UL508, CUL Canadian C22.2 No. 142-M95, UL File E157382
Physical:	
• Dimensions	6.394" (W) x 10.000" (H) x 2.488" (D) [162.4 mm x 254.0 mm x 63.2 mm]
• Weight	26.1 oz. [740 g]

Replacement Parts

Part Number	Description
EA-MG-BZ2-BRK	Replacement mounting clip for ***C-more*** Micro-Graphic panel and keypad bezels (pk of 8)
EA-MG-DC-CON	Replacement DC power connector (pk of 5)
EA-MG6-S6ML-GSK	Replacement mounting gasket for ***C-more*** 6" Micro-Graphic panels
EA-MG6-BZ2-GSK	Replacement mounting gasket for ***C-more*** 6" Micro-Graphic keypad bezels EA-MG6-BZ2 and EA-MG6-BZ2P
EA-MG-S6ML-FKL	Replacement function key label insert for ***C-more*** Micro-Graphic panels (pk of 5; 3 blank, 1 F1-F5 for landscape, 1 F1-F5 for portrait)

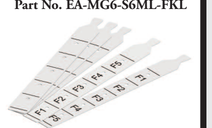
Panel Mounting Clips
Part No. EA-MG-BZ2-BRK

(pk of 8)

DC Power Connector
Part No. EA-MG-DC-CON

(pk of 5)

Function Keys Label Inserts
Part No. EA-MG6-S6ML-FKL



(pk of 5; 3 blank, 1 F1-F5 for landscape, 1 F1-F5 for portrait)

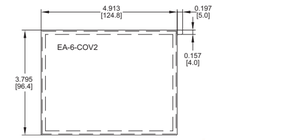
Panel Gasket
Part No. EA-MG6-S6ML-GSK

Keypad Bezel Gasket
Part No. EA-MG6-BZ2-GSK

Clear Screen Overlay

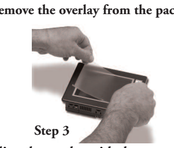
EA-6-COV2

Dimensions



Step 1
Remove the overlay from the package

Step 2
Remove the paper backing from the overlay



Step 3
Align the overlay with the screen and press the adhesive firmly into place

***NOTE: The protective cover ships with a thin protective sheet on the face of the cover that needs to be carefully removed. If your panel is not clear, the protective sheet may not have been removed.**

Step 4
Remove the protective film*

Data Sheet: EA1-MG6-QSG, Rev. J